

Remarks

Entry of the above amendments is requested for the purpose of obviating the objections and technical rejections.

With reference to the rejection of originally presented claims 1-8 under 35 U.S.C. 102(b) as allegedly anticipated by the disclosure of U.S. Patent No. 5,734,116 to Schaeffer (the '116 Schaeffer reference), it is respectfully submitted that the invention defined by the current claims is neither anticipated by, nor obvious over, the disclosure of the '116 Schaeffer reference for the following reasons. The '116 Schaeffer reference is directed to a NEMA cabinet monitor tester for testing a conflict monitor 20 in the field, rather than in a lab (see col. 5, lines 45-53). This provides an undisturbed conflict monitor tested under actual working conditions. At the same time, the controller cables 28A, 28B, and 28C, terminal panel 12, load switches 14, flasher 16, monitor cables 37A and 37B, terminal strip 22, and the field wiring can also be verified for proper operation.

Contrary to the Examiner's statement (in paragraph 3 of the outstanding Office Action), the tester 40 is never connected to the traffic signal controller 18. As clearly described in the specification (see Col. 5, lines 62-67) the first step in the testing procedure requires the technician to disconnect cables 28A, 28B, and 28C from the controller 18. These cables are then connected to jacks J1, J2, and J3 of the tester 40. Wire 42 is plugged into jack J4 to connect the tester 40 to the monitor reset terminal on the back panel 12.

Once connected, tester 40 tests the operation of conflict monitor 20 by supplying simulated traffic control signals representing various conflicts and faults to monitor 20 and detecting whether monitor 20 responds correctly. The simulated signals are generated by manipulating switches 44 to various positions. The Red Fail fault is simulated by switching the RED switch to the center (off) position on each used channel (Phase 1 through Phase 8 and overlap A through overlap D). The switch is then returned to the down (auto) position after each test. The top row of toggle switches 44 on the tester 40 are three-position (ON-OFF-AUTO) switches. In the AUTO position, the red indication will extinguish when green or yellow is switched on for the same channel (see Col. 6, lines 27-34). After each conflict test is finished, the monitor

20 is reset by the technician by simply pressing the monitor reset switch SW1 shown in Fig. 3. When all tests have been performed, tester 40 is disconnected by removing cables 28A, 28B, and 28C from jacks J1-J3 and disconnecting wire 42 from jack J4. Cables 28A, 28B, and 28C are then reconnected to the jacks on controller 18. Testing is now complete.

In contrast to the structure and function of tester 40, independent claim 1 is expressly directed to a malfunction management unit (a term which encompasses a conflict monitor) which enables selective actuation of the Red Fail test on a channel specific basis. As clearly noted in the Background of the Invention section of the instant application, known malfunction management units do not have this capability. Once the Red Fail fault test is activated in known monitors, the test is applied to all channels used in the intersection. As further noted in the introductory portion of the instant application, there are some intersection installations in which the Red Fail test is inappropriate for one or more channels used in the intersection. Consequently, if the Red Fail test is activated in such an intersection, false Red Fail faults will be registered. The invention solves this problem by providing a channel selection means for enabling a Red Fail test on a channel specific basis.

Claim 1 requires a malfunction management unit for a traffic control system for monitoring traffic control signals for a Red Fail fault in which no signal is active in a given channel, the malfunction management unit having input terminals for receiving control signals grouped in channels and used to operate the traffic control lights, monitoring means for detecting a Red Fail fault from the signals in the channels, and channel selection means for enabling a Red Fail test on a channel specific basis. The '116 Schaeffer reference discloses a conflict monitor 20 having a Red Fail test capability, but lacks any teaching of channel selection means for enabling a Red Fail test on a channel specific basis. In the '116 Schaeffer reference the Red Fail fault test, when enabled, conducts the Red Fail test on all used channels. Stated differently, the conflict monitor 20 will conduct the Red Fail test on all used channels whenever this test is enabled for the monitor 20. The fact that switches in the tester 40 can be manipulated to generate simulated Red control signals for different channels does not affect the operation of the Red Fail test in monitor 20. In addition, switches 44 are not part

of the monitor 18, but are part of tester 40. Nor would it be obvious to combine features found in tester 40 with the monitor 20. Tester 40 and monitor 20 are two separate units with different properties, structure and function. For all these reasons, it is respectfully submitted that claim 1 is clearly patentable over the teachings of the '116 Schaeffer reference.

Claim 2 adds the further limitation to claim 1 of a manually settable switch for enabling and disabling the channel selection means. This feature permits the field technician to either enable or disable the channel selection feature of the basic invention of claim 1. This feature adds the capability of disabling the channel selection capability for those intersections where it is not needed. Nothing in the '116 Schaeffer reference teaches directly or inherently suggests such a functional capability. The manual switches pointed out by the Examiner in the outstanding Office Action as allegedly meeting this limitation only function to establish the nature of the simulated traffic control signals (e.g., Red, Yellow Green, etc) and do not change the programmed operation of the monitor 20. In fact, since the purpose of tester 40 is to test the programmed operation of monitor 20, any attempt to alter the effect switches 44 have on the normal operation of monitor 20 would teach directly away from the disclosure of the '116 Schaeffer reference. Consequently, it is respectfully submitted that claim 2 is patentable over the disclosure of the '116 Schaeffer reference for these additional reasons.

Claim 3 adds the further limitation to claim 1 of a display for indicating whether a Red Fail fault has occurred in a selected channel. Since the '116 Schaeffer reference does not disclose a monitor capable of selecting certain channels for which a Red Fail test will be performed, the display 30 is incapable of displaying an indication whether a Red Fail fault has occurred in a selected channel. For these reasons, claim 3 is believed to be patentable over the disclosure of the '116 Schaeffer reference.

Method claims 5-8 are believed patentable for the same reasons advanced above with respect to apparatus claims 1-4

The remaining references have been carefully considered, but are not seen to supply the deficiencies noted in the '116 Schaeffer reference cited and applied in the outstanding Office Action.

In view of the above remarks, it is respectfully submitted that this application is clearly in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this case for issue.

If deemed useful in any further prosecution of this application, the Examiner is invited to contact the undersigned at 702-270-8853.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Warren P. Kujawa". The signature is written in a cursive, flowing style.

Warren P. Kujawa

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